

rate of freight to Portland, 89c., making the total cost, delivered in Portland, \$4 64 per square. I understand that the market price for such slates in Boston and New York varies from \$8 to \$10 per square, which will afford a very handsome profit over the cost of transportation from Portland to these parts; and this profit will be in addition to that which will accrue as stated upon the delivery of the slates at Richmond.

Quality and Quantity.

"As regards the excellent quality of the Melbourne slates, I can speak with the utmost confidence; and the specimens which will accompany this Report, together with the analysis by Mr. Hunt contained in Sir William Logan's Descriptive Catalogue (page 41), and certificate of an experienced slate merchant in this city, will establish the accuracy of my statements.

"The quarry, as already remarked, has only been worked to the depth of seventy feet, while some of the Welsh slate quarries are worked (as this is also capable of being) to the depth of 400 feet from the surface. It is well known that the slate always improves in hardness, toughness, uniformity of color, and all other desirable qualities the deeper it is wrought; but even at the moderate depth hitherto attained, the Melbourne slates leave little further to be desired in these respects, and are not inferior to any in the world. They are remarkably uniform in the color, perfectly smooth and even in the cleavage, they split with great facility when first taken from the quarry, but rapidly harden and acquire great strength and toughness. Their color is unaffected by acids; they are perfectly non-absorbant of water, and consequently unaffected by frost; and when struck with a hard body, emit the metallic ring so much prized by slaters. The rock is remarkably free from joints, spar-veins, and other impurities affecting its uniform quality; even at the moderate depth at which it is now worked, the quarry would yield slabs of upwards of six feet square free from flaws.

"With regard to quantity, it will be obvious from the extent of the slate rock on the property as already stated, and its probable uniformity of character, that these quarries may be regarded as practically inexhaustible. From their position as regards drainage, &c., no machinery for pumping or hoisting would probably ever be required. The perpendicular cleavage of the rock gives great facilities for working the quarry to advantage which are not enjoyed by many others.

Markets for Slates.

"The advantages possessed by these slate quarries in point of position, as well as the excellence of the

material produced, will enable the proprietors readily to command the trade of the whole Province of Canada, in which slate is rapidly superseding all other material for roofing purposes. The facilities for water conveyance by the St. Lawrence and the lakes will enable them also to compete successfully for the supply of the western cities of the Union; and as I have already shown, there will be a large margin for profits in the New York and Boston markets, even after allowing for railway transportation to Portland. There is a good market for slates in the West Indies which could be readily supplied from this source; and even in England the demand for slates has recently become as greatly in excess of the supply, that it is highly probable the Melbourne slates could be shipped to a profit from Portland to Liverpool. (See *London Mining Journal* for April, 1863, p. 252.)

"It should be remarked, that although many attempts have been made to establish slate quarries in Canada, they have all failed from want of the peculiar excellence of quality and natural facilities for working possessed by the Melbourne quarries; therefore there is little ground for apprehension on the score of competition in this country. In addition to its use for roofing purposes, this slate is admirably adapted for the production of slabs of all sorts, which are now extensively in use for many purposes, and which, by the introduction of simple and inexpensive machinery, could be manufactured to any extent on the property."

WEIGHTS AND MEASURES.

The importance of a uniform system of weights and measures has long been recognised in the United Kingdom. By common consent an approach to this desideratum has gradually taken place in the United States and Canada. Yet we are still far behind the French, and those nations who have adopted the French system in this important matter. While the country is yet young, it would appear advisable to adopt some general plan of action, which shall ultimately convert all our weights and measures into decimal parts of one standard. It is proposed in the British parliament to effect this object in a greater or less degree by adopting parts of the French system; and the only objection to the proposed system appears to be that it does not embrace the French system as a whole. The *Chemical News* contains a short article on this important subject, which is deserving of consideration, as if the recommendation of the bill before the British Parliament is adopted, it will have a considerable effect upon the mixed system in vogue with us.